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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,017	09/18/2003	Yves Gagnet	MCA-579	7951

7590
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EXAMINER

KURTZ, BENJAMIN M

ART UNIT	PAPER NUMBER
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1797

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/666,017	Applicant(s) GAINET ET AL.	
	Examiner BENJAMIN KURTZ	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-12.14-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-12.14-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1, 2, 4-12 and 14-23 are pending, claims 3 and 13 are cancelled.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. **Claims 1, 2, 4-6, 14-16, 18-21 and 23 are rejected under 35 U.S.C. 103(a) as obvious over Bray US 3 542 199, Brown US 4 990 248 and Burrows US 5 221 473.**

Claims 1 and 14-16, Bray teaches a module comprising: a cylindrical container provided at a first of its axial ends with a head (20) having fluid inlet and outlet orifices communicating with the interior of the module and having a cylindrical skirt (part containing 38) projecting axially therefrom, in which are housed pretreatment means (32) and treatment means (60), which perform the same function in substantially the same way with substantially the same result as the pretreatment and treatment means disclosed herein, wherein the container is monolithic to form a disposable module and the interior is divided by separator means (36), which perform the same function in substantially the same way with substantially the same results as the separator means

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disclosed herein, into an external cylindrical space and an internal cylindrical space, the separator means extending from the cylindrical skirt to the bottom of the container, the external and internal cylindrical space communicating with each other via one or more passages at the bottom of the container, the treatment means include a cartridge including one or more selectively permeable membranes, the pretreatment means is housed in the external cylindrical space and the treatment means is housed in the internal cylindrical space, the external cylindrical space communicates, at the first axial end of the container with a first orifice (30) and the internal cylindrical space communicates separately, at the first axial end, with an orifice (88), the cartridge comprises a cylindrical enclosure and concentric therewith a hollow perforated central innermost tube (58) of the cylindrical container in which the cartridge is contained, the central inner most tube sharing the axis of the cylindrical container with the external cylindrical space and the internal cylindrical space, a reverse osmosis treatment membrane between the cylindrical enclosure and the central inner most tube and communicating with the central innermost tube (fig. 1). Bray does not teach the first axial end having an inlet and two outlets or the bottom comprising a crenellate ring.

Brown teaches a module comprising: a cylindrical container (44, 50) comprising a cylindrical wall closed at a first axial end by a head (45, 51) and closed at a second axial end by a bottom (46, 55), the container provided at the first axial end with fluid inlet and outlet orifices communicating with the interior of the module, in which are housed pretreatment means (16, 60) and treatment means (29, 70), which perform the same function in substantially the same way with substantially the same result as the

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pretreatment and treatment means disclosed herein, the container is monolithic and the interior thereof is divided by a separator (15, 71) into an external and internal cylindrical space communicating with each other via one or more passages in the vicinity of the second axial end of the container, the separator comprising a cylindrical wall extending from the head toward the bottom, the treatment means includes a cartridge including one or more selectively permeable membranes, the pretreatment means and the cartridge are housed in the external cylindrical space and the internal cylindrical space respectively, the external cylindrical space communicates at the same end as the first axial end of the container, with a first orifice (48, 54), and the internal cylindrical space communicates separately at the same end as the first axial end of the container with a second orifice (43, 56) and a third orifice (91, 58), the cartridge comprises a cylindrical enclosure and concentric therewith a hollow perforated central tube (12, 62), the central tube sharing the axis of the cylindrical container with the external cylindrical space and the internal cylindrical space, one or more reverse osmosis treatment membranes between the cylindrical enclosure and the central tube and communicating with the central tube (fig. 1, 2, 5). If the tube (12, 62) is not considered to be the innermost tube of the container, it would have been obvious to one of ordinary skill in the art at the time the invention was made to remove the post-filter (30, 75) should it be desirable to replace less than the entire filter cartridge (col. 10, lines 38-42) and omission of an additional filtering step would be obvious if this feature were not desired, *In re Larson*, 144 USPQ 347 (1965). Upon removal of the post-filter the tube (12, 62) being the innermost tube of the cartridge would also be the innermost tube of the cylindrical

container. Brown does not teach the separator wall extending from the head to the bottom or a crenellated ring.

The use of a separator wall extending from the head to the bottom is known in the art as taught by Bray and the use of a head assembly having an inlet and two outlets is also known in the art as taught by Brown. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention, *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (2007).

Bray teaches a loose connection between the wall (36) and the bottom provides a flow path for fluid to flow from exterior cylindrical space to the interior cylindrical space. Burrows teaches a crenellated ring of the bottom of a reverse osmosis cartridge, the ring includes locating means (160) taking the form of patterns (160) projecting from the internal face of the bottom of the container, the ring holds a cylindrical wall (142) of a separator means at a an axial distance from the face of the bottom, and the ring includes recesses between the crenellations forming axial abutments for the wall (142) (fig. 4 and 5, col. 8, lines 20-28) with passages for fluid formed by the crenellations in the crenellated ring. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the ring as taught by Burrows in the module because the ring allows water to pass through it to a central tube (fig. 5, col. 8, lines 24-

25). The ring of Burrows would allow a less restricted flow of fluid from the outer cylindrical space to the internal cylindrical space.

Claim 2 and 5, Bray and Brown further teach the cartridge is a reverse osmosis cartridge (abstract of both Bray and Brown); and the pretreatment means is frontal filtration or polyphosphates (Brown: col. 8, line 53 – col. 9, line 52, Bray: col. 2, lines 10-15).

Claim 4, Bray further teaches means (90) for providing a sealed connection between the separator and the cylindrical enclosure of the cartridge, the seal being attached to the cylindrical enclosure and the extending around the cylindrical enclosure (fig. 1).

Claim 6, Brown further teaches the container includes a cylindrical wall closed at the first axial end by the head module including three parallel connectors (48, 43, 91) in each of which is formed one of the three orifices (fig. 1, 2). The recitation of the head and bottom being non-removable is merely a recitation of making the head and bottom integral with the housing. [T]he use of a one piece construction instead of the structure disclosed in [the prior art] would be merely a matter of obvious engineering choice; *In re Larson* 144 USPQ 23 1952.

Claim 23, Brown further teaches the central tube is closed at the same end as the annular face of the cartridge through with the fluid enters the cartridge (fig. 1, 2).

Claims 18-21, Brown further teaches in the second embodiment the head and the bottom each include a nesting retainer (head retainer at 53d, bottom retainer at 79d)

housing an axial end of a central tube (62), a seal (59d) is between the bush and the tube (63) housed in a groove formed in the central tube (63), and the bush communicates with the second orifice (58) (fig. 5); and a central truncated cone (joined to the tube (62) at 79') inside the central tube (62) and it projects over a longer distance from the inner face of the bottom than the retainer of the bottom (fig. 5).

2. Claims 7, 8, 10-12 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bray '199, Brown '248 and Burrows '473 as applied to claim 1 above, and further in view of Regunathan et al. US 4 645 601.

Claim 7, Bray, Brown and Burrows teach the module of claim 6 but do not teach the connectors (54, 56, 58) extend perpendicular to the axis of the container.

Regunathan teaches a head (30) with three parallel ports (50, 52, 54) with connectors that can take various forms to accommodate the construction of the particular head member with which it is to be associated (col. 3, lines 8-11). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the connectors to be perpendicular to the axis of the container to fit a head member adapted to connect to a module with perpendicular ports.

Claim 8, Bray teaches the skirt provides continuity of separation from a corresponding longitudinal end of the cylindrical wall to the bottom and Burrows teaches the ring provides continuity of separation from a corresponding longitudinal end of the cylindrical wall to the head.

Claims 10-11, Brown further teaches the cylindrical skirt (53) has the wall (71) housed concentrically within it with a seal (59d) in an annular recess between them (fig. 5).

Claim 12, Brown further teaches housing the wall (71) within the skirt (53) therefore it would have been obvious to one having ordinary skill in the art to house the wall (71) within the ring (28) as taught by Whittier (876) because the skirt provides a bearing surface for the wall (71) for sealing (col. 7, lines 17-19).

Claim 22, Brown further teaches a porous disk (35) in the vicinity of the axial ends of the container but not retaining the pretreatment means. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the disk for the pretreatment means. The porous disks function to keep the carbon granules within the filter (col. 4, lines 61-63).

3. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bray '199, Brown '248, Burrows '473 and Regunathan '601 as applied to claim 8 above, and further in view of Petrucci et al. US 4 948 505.

Bray in view of Brown, Regunathan and Whittier teaches the filter module but do not teach the head being glued or welded together. Petrucci teaches the top cover (134) bonded to the main housing (54) by welding (col. 9, lines 48-50). It would have been obvious to one having ordinary skill in the art at the time the invention was made

to use the welding as taught by Petrucci because the canister is easily and economically fabricatable (col. 9, lines 3-5).

4. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bray '199, Brown '248, Burrows '473 and Regunathan '601 as applied to claim 8 above, and further in view of Gundrum et al. US 5 891 334.

Bray in combination with Brown, Regunathan and Whittier teaches the filter module of claim 8 but does not teach centering fingers. Gundrum teaches a cylindrical separator wall (33) with radially extending fingers (34) extending to the container wall (25) in the vicinity of each axial end of the wall (33) (fig. 2 and 5). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the fingers as taught by Gundrum because the fingers (34) define a flow passageway between the separation wall (33) and the container wall (25) (col. 4, lines 51-67).

Response to Arguments

5. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BENJAMIN KURTZ whose telephone number is

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(571)272-8211. The examiner can normally be reached on Monday through Friday 8:00am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Benjamin Kurtz
Examiner
Art Unit 1797

/Krishnan S Menon/
Primary Examiner, Art Unit 1797